

Amendments to the Claims

Claim 1-21 (cancelled).

Claim 22 (currently amended): A semiconductor processing method comprising:

forming an antireflective material layer comprising silicon, oxygen and nitrogen over a substrate;

after forming the antireflective material layer, annealing at least a portion of the antireflective material layer at a temperature of greater than 400°C;

forming a layer of photoresist over the annealed antireflective material layer;

patterning the layer of photoresist to form a patterned layer of photoresist; and

removing a portion of the antireflective material layer unmasked by the patterned layer of photoresist.

Claim 23 (original): The method of claim 22 wherein the layer of photoresist is formed against the antireflective material layer.

Claim 24 (currently amended): A semiconductor processing method comprising:

forming an antireflective material layer comprising silicon, oxygen and nitrogen over a substrate;

after forming the antireflective material layer, annealing the antireflective material layer at a temperature of greater than 400°C;

forming a layer of photoresist over the annealed antireflective material layer; and exposing portions of the layer of photoresist to radiation waves, some of the radiation waves being attenuated by the antireflective material layer during the exposing.

Claim 25 (previously presented): The method of claim 24 wherein the attenuation comprises absorbing radiation waves with the antireflective material layer.

Claim 26 (original): The method of claim 24 wherein the layer of photoresist is formed against the antireflective material layer.

Claim 27 (original): The method of claim 24 further comprising exposing the antireflective material layer to a nitrogen-containing atmosphere during the annealing.

Claim 28 (previously presented): A semiconductor processing method comprising;

- forming a solid antireflective material layer comprising silicon, oxygen and nitrogen over a substrate;
- after forming the solid antireflective material layer, altering optical properties of the solid antireflective material layer by annealing the solid antireflective material layer at a temperature of greater than 400°C;
- after altering the optical properties, forming a layer of photoresist over the solid antireflective material layer; and
- exposing portions of the layer of photoresist to radiation waves and absorbing some of the radiation waves with the solid antireflective material layer.

Claim 29 (previously presented): The method of claim 28 further comprising exposing the solid antireflective material layer to an atmosphere during the altering, the atmosphere comprising at least one of nitrogen and argon.

Claim 30 (original): The method of claim 28 wherein the optical properties which are altered include at least one of a refractive index coefficient or an extinction coefficient.

Claim 31 (previously presented): The method of claim 28 wherein:

the forming comprises chemical vapor depositing the solid antireflective material layer onto the substrate at a temperature of from about 300°C to about 400°C, the exposing forms exposed portions of photoresist and unexposed portions of photoresist; and

the exposed or unexposed portions of photoresist are selectively removed while leaving the other of the exposed and unexposed portions of photoresist over the substrate.

Claim 41 (previously presented): The method of claim 22 wherein the annealing comprises annealing at a temperature of from about 800°C to about 1050°C.

Claim 42 (previously presented): The method of claim 22 wherein the annealing comprises altering optical properties of the antireflective material layer.

Claim 43 (cancelled).

Claim 44 (previously presented): The method of claim 24 wherein the annealing comprises annealing at a temperature of from about 800°C to about 1050°C.

Claim 45 (previously presented): The method of claim 24 wherein the annealing comprises altering optical properties of the antireflective material layer.

Claim 46 (cancelled).

Claim 47 (previously presented): The method of claim 28 wherein the altering comprises annealing at a temperature of from about 800°C to about 1050°C.

Claim 48-62 (cancelled).